AQS 2003

Albuquerque

AQSWEB User Training

Session One   Monday 8:30 – 11:30

- New System, New Changes
- Data Input Process "The Basics" for Loading Raw Data
- Loading Raw Data Exercise (Clean Data)

Session Two Monday 1:15 – 4:30

- Data Input Process (Correcting Errors)
- Loading Raw Data with Errors Exercise
- The "Fred" Exercise

Session Three Tuesday 8:30 – 11:30

- Browsing the AQS Data
- The Standard AQS Reports
- Oracle Discoverer

Helpful AQS Appendixes

- Appendix A - Tips
- Appendix B – Data Input System Flow
- Appendix C – Discoverer
- Appendix D – Glossary of Terms
- Appendix E - Set up
- Appendix F - Data Transactions
- Appendix G - AQS Directories and Accounts
- Appendix H – Transaction Requirements

Where to Get More Information

- The AQS HELP DESK
1-800-334-2405 or 919-541-7862
Password Resets and Application Errors

- The CDX Help Desk   1-888-890-1995   CDX
Password Resets and CDX Support

- The IMG Technical Support   email
to Jake Summers (summers.jake@epa.gov)
User registration, Assigning new screening
groups, Data questions, Issues, Policies and
procedures

- The AIRS AQS TTN website
(www.epa.gov/ttn/airs)

New System, New Changes

New System, New Changes

- New Architecture – The new AQS system is an Oracle Forms from a Web server-Server Application using an Oracle database

- Installation/Login is Simple

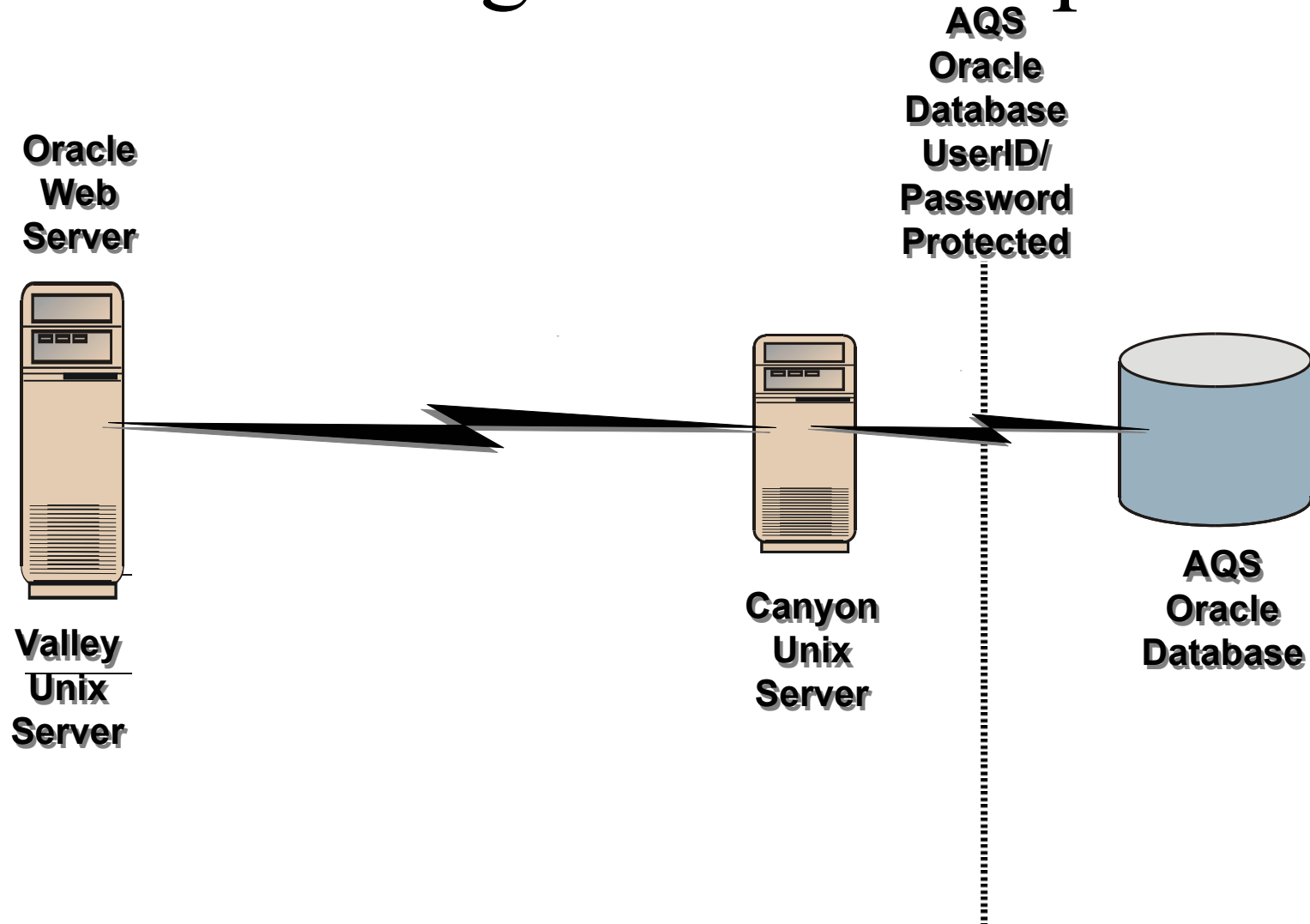- New Upload/Download process – CDX application replaces the FTP process

The AQS Architecture
Data Input Process

Oracle Web Server

CDX UserID/ Password Protected

Canyon UserID/ Password Protected

AQS Oracle Database UserID/ Password Protected

CDX

Load

Valley Unix Server

CDX Unix Server

Canyon Unix Server

AQS Oracle Database
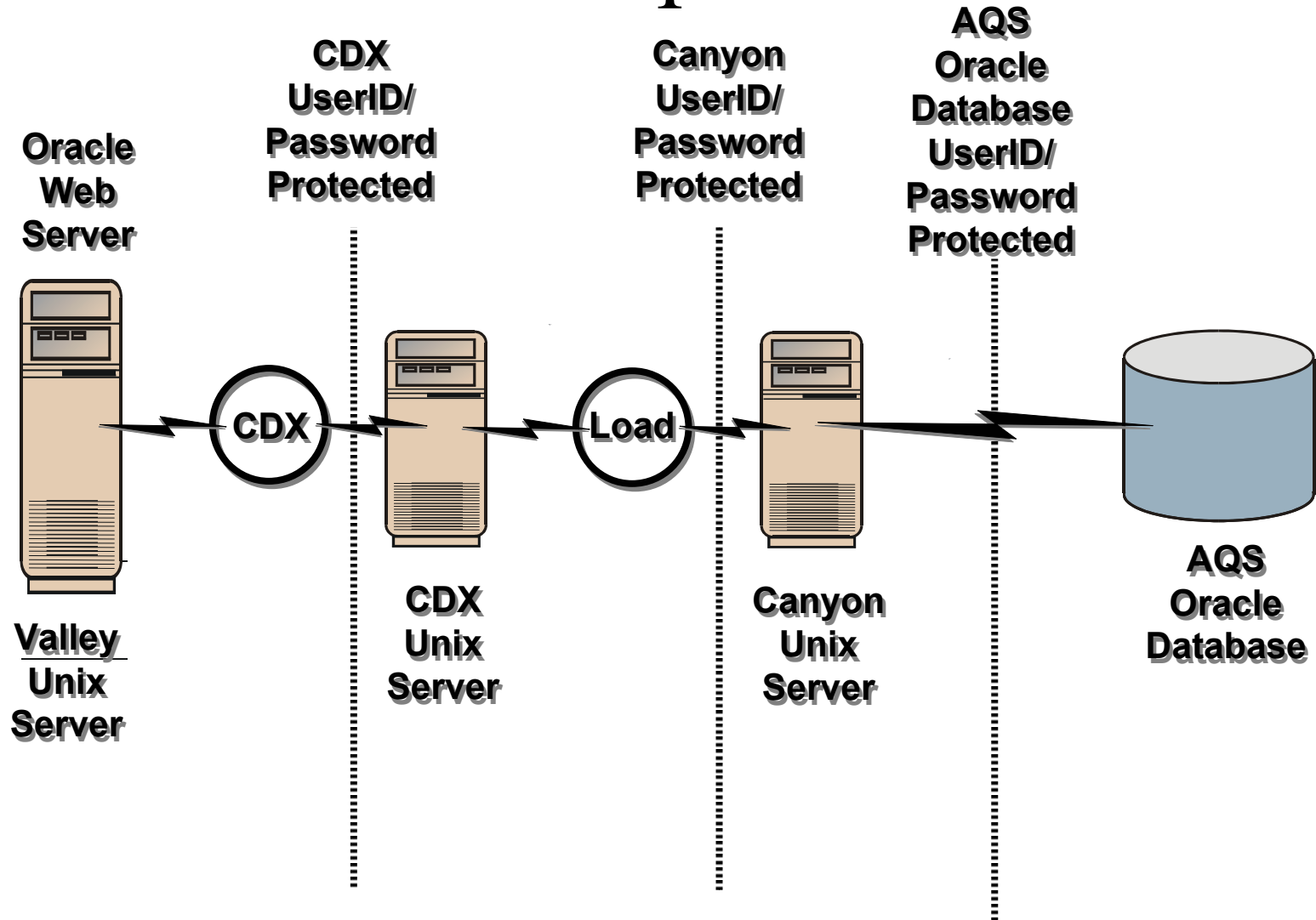
The AQS Architecture
Maintaining Data and Reports

AQS
Oracle
Database
UserID/
Password
Protected

Oracle
Web
Server

Valley
Unix
Server

Canyon
Unix
Server

AQS
Oracle
Database

Installation/Logging on AQS

- No Client Software to install!
- No Oracle software to install|
- No more SecuRemote to access AQS!
- Must use Internet Explorer 6.0
- Use AQSWEB URL to access AQS

Login Procedures

- Open up a Internet Explorer Browser

- The AQSWEB URL is:

  https://oasint.rtpnc.epa.gov/servlet/f60servlet?config=aqs&form=A000.fmx
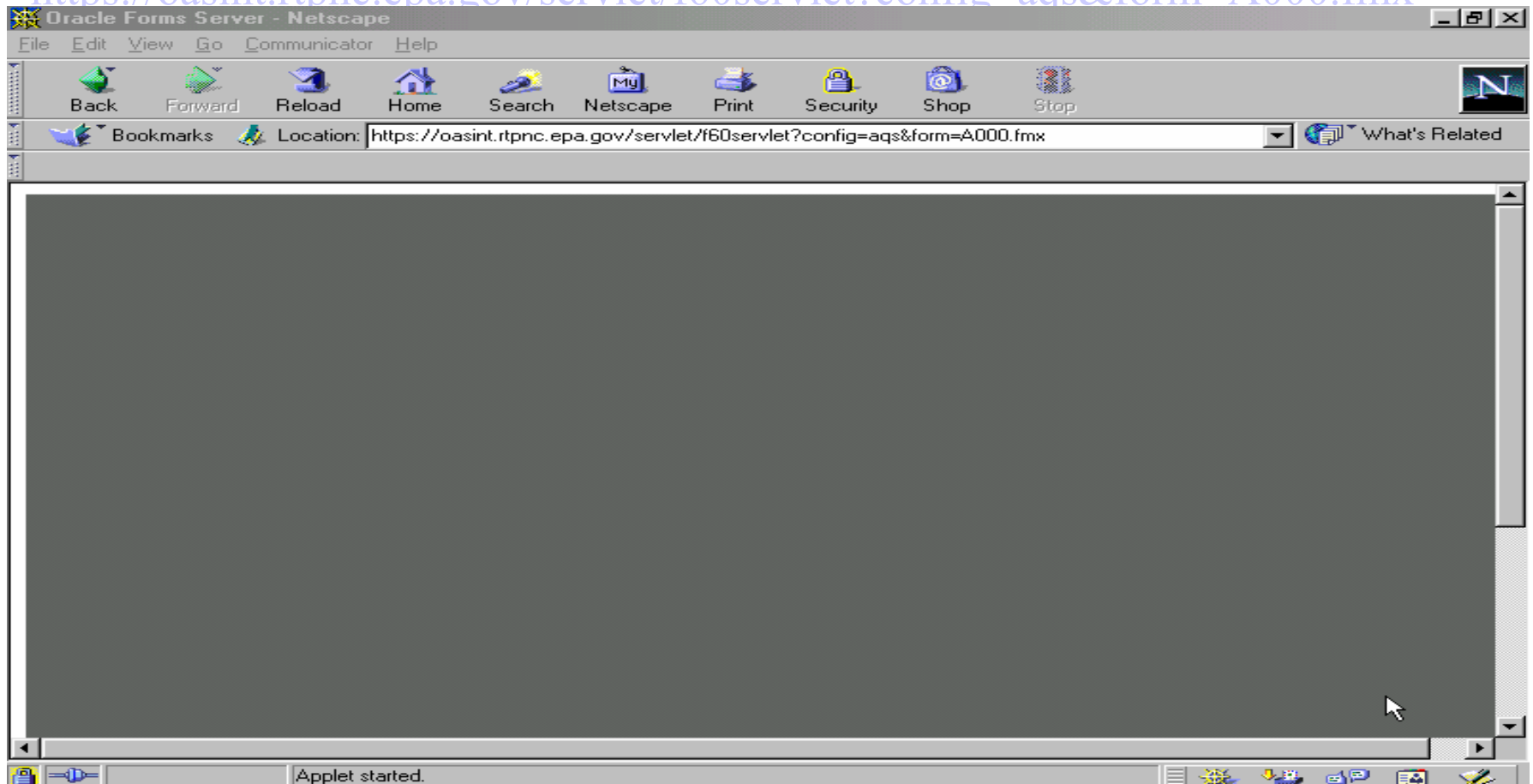
Login Procedures

- This URL will open up a second screen
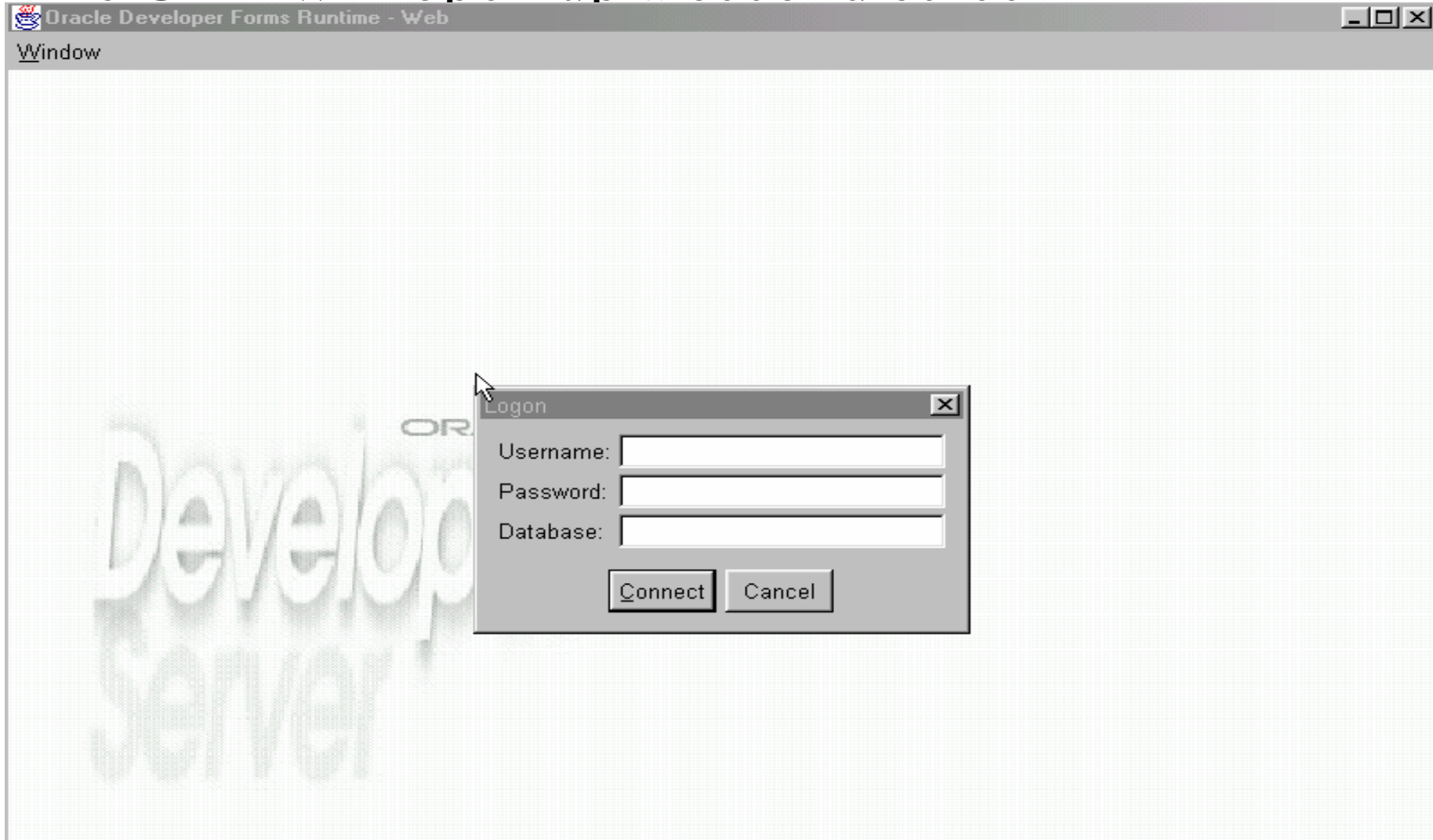
Login Procedures

- Must login to with your Oracle User Id and Password and the AQS Oracle database name. For this class ONLY:
  - user id's: t50 to t79
  - password: aqsis4me2
  - database: aqstrng

-
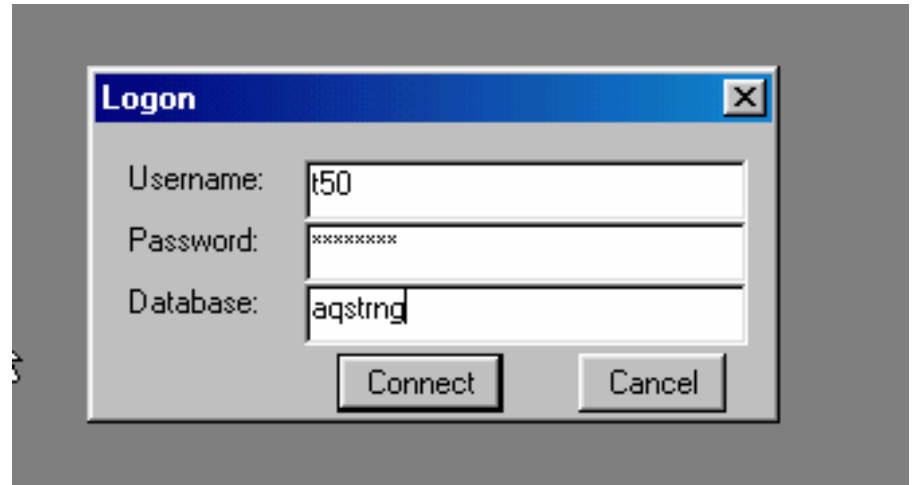
- NOTE: Your PRODUCTION userid is a 3 character id and the production database is AQSPROD

Id's and Passwords

- **To get to AQS you need to have**:
  - CDX is used when you Transfer your data to the EPA. The CDX server is used as a holding tank for data before it is sent to the AQS database.
  - Canyon is used to house the AQS Database which is named AQSPROD. It has 10 years of raw data and all summary data. It is also the Unix processor for all batch load and batch reports.
  - Call the Customer Call Center (1-800-334-2405 or 919-541-7862) if you have forgotten, misplaced or if you think your password has been compromised.

- **Passwords need to be changed every 90 days!**

EPA Security and You

- **Passwords will change every 90 days.**

- **Do not write down your password or store it on a computer.**

- **Do not build User IDS and passwords into automated procedures, define them by function keys, not program them into applications.**

- **Do not tell others your passwords.**

- **Report unauthorized attempts to use your password to an EPA security staff member.**

- **More security information? Go to http://intranet.epa.gov/hqintran/oirm/security/train.htm and click on Standards of Behavior for Security of Information Resources, Section 3.**

- **Passwords can be changed within the AQS application.**

New Update Process

- Users control schedule
- On-line update capability
- EPA performs QA data review after load to production.
- Load process performs current level 1 & 2 edits --- Site / monitor relationship, raw data edits
- "Hung" submitted batch sessions can be "cancelled"
- Additional edits for state specific concentration limits (please notify IMG support team with requests for these)
- Critical review - flags high data values

New Update Process II

- New data elements have been added to Site, Monitor and raw data.

- Data can be loaded in a mixture of old and new transactions.

  – **Note: Old Txn #4 as well as Site/Monitor format is not supported**.

- Daily summaries - PM 24 hr data and all hourly data

  – Number & percentage, max, time of max, mean, ranking, violation

- Quarterly Summaries - as needed for NAAQS pollutants

- Annual summaries - null data count, more percentiles, first 10 max values & time, certification indicator instead of SLAMS summaries.
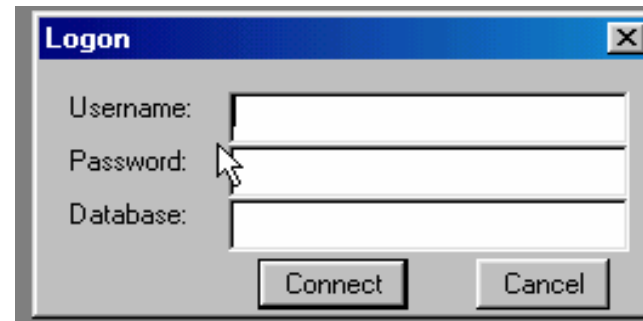
Screening Groups

- Can contain one or more people per screening group

- Monitors are assigned to the screening group.

- All users within the screen group have access to ANY data for the assigned monitor.

- Only one "BATCH JOB" can be running at a time for a screening group.

- Unless you "exclude" raw data from being posted, if someone in your screening group runs the POST Batch Job, ALL Raw data in the screening group will be posted to the database.

- The "Delete by Screening group" option will delete ALL data in the staging tables (data that did not pass level 1 and level 2 edits) for all users in the screen group. Only one person per group has this authority.

- Appendix G – AQS Directories and Accounts has information about the screening groups assigned to your state.

- If you need additional screening groups contact Jake Summers to request additional screening groups.

Instructor Lead Class Exercise 1

- Step 1: Open up a Internet Explorer Browser

- Step 2 : Go to the AQSWEB URL:
  https://oasint.rtpnc.epa.gov/servlet/f60servlet?config=aqs&form=A000.fmx

- Step 3. Once the Connect Box appears in the second screen,
  type in your class username (t%%),
  password (aqsis4me2) and database – aqstrng,
  Click on Connect.

Instructor Lead Class Exercise 1

Step 3. Select the screening group access Option and choose your screening group. Click OK. NOTE: The "read only" button gives you read only access.

Instructor Lead Class Exercise 1

- Step 4. Examine the "tool bar". Move your pointer to each of the pull down menus on the top of the screen (items: action thru window)

Action Help Session Admin Retrieval Maintenance Poc Critical Rev CErtification Batch COrrect

Save

Print screen

Print setup

Exit

and Edit/cut copy paste

Enter query

Execute Query

Cancel Query

Execute Query

Instructor Lead Class Exercise 1

Action Help Session Admin Retrieval Maintenance Poc Critical Rev CErtification Batch COrrect
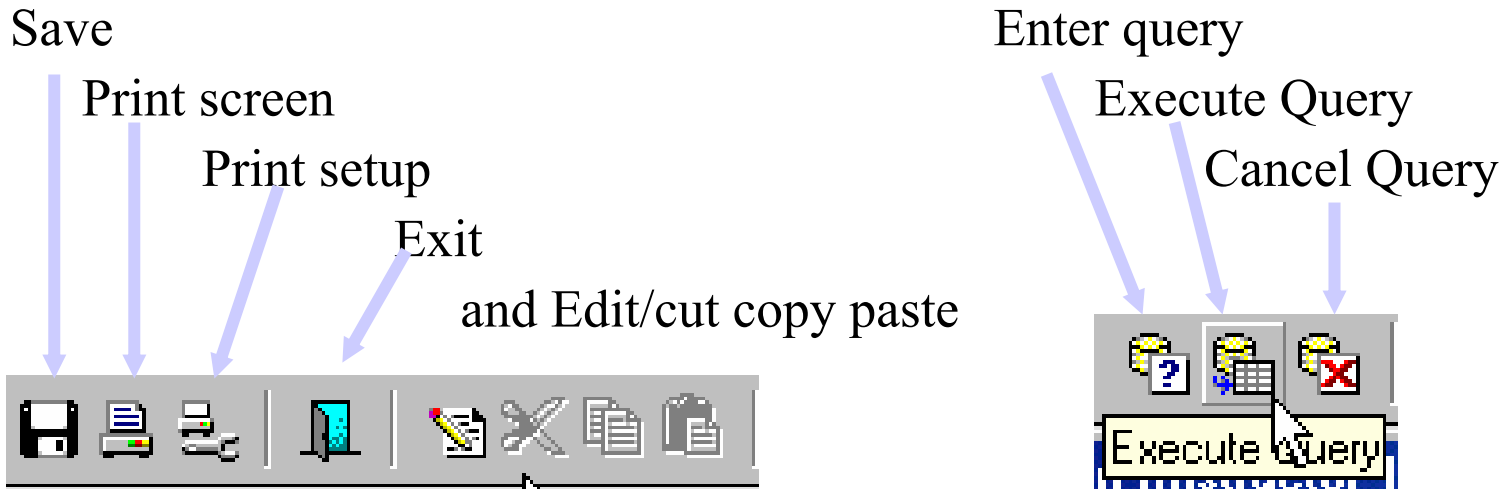
First record   Last Record   Insert record   Clear record
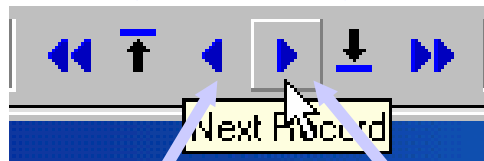
Prev Record   Next Record   Delete Record   Duplicate Record

Instructor Lead Class Exercise 1

- Step 5. Click on the menu bar item "Admin", from the drop down bar, choose the "Security" option.

- Step 6. Change the Email address to your Student email address, aqs_t##@hotmail.com, change the Source file to c:\aqs_train\testdata\sitemt, change the DEST file to /data/aqs/aqs_train/t##, where ## is your student

Instructor Lead Class Exercise 1

Note – arrow A   Change your logon Oracle password. This should be done every 90 days.

Note – arrow B   You can synchronize your CDX password on this screen.

Note – arrow C Unix server passwords must be changed to match the Oracle Password. Enter the original (Unix) Canyon and Volcano passwords. Press "synchronize" to change it to your Oracle password.   This MUST be done before initial batch processing! Your Oracle login password is passed to batch load jobs and must match.

Note – When changing "A", "C" must also be re-done. AQSTRNG is already synchronized.

Instructor Lead Class Exercise 1

- Step 7.   Click on the menu bar "Main Menu"
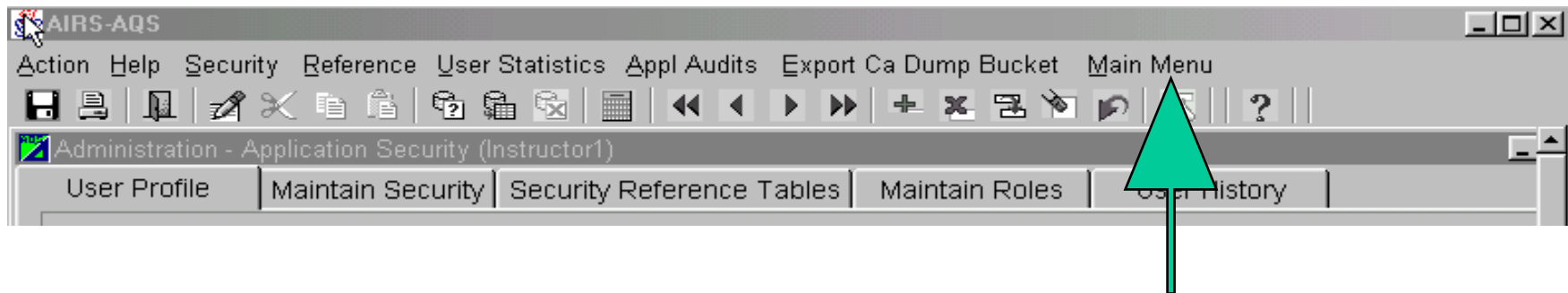
- Step 8. Close AQS:

Basic Functions Exercise

- Please turn to Student Exercise 1.

- Use your assigned student username (t##), and password aqsis4me2, database is aqstrng

- Where ## is your assigned student number

AQS Data Input Process

The Batch Load Basics –

FTP, Load and Post

Introduction

- "Batch" data refers to a file of transaction records. It can include Site, Monitor, and Raw data transactions as well as Precision and Accuracy Data.

- Raw Data – crucial component of the AQS database

- State/Local/Tribal agencies are responsible for adding and updating AQS data

- You provide the data: EPA provides the software and the database

Recall Design

- Sites
  - Monitors
    - Raw Data
    - Summary Data
    - Composite Data
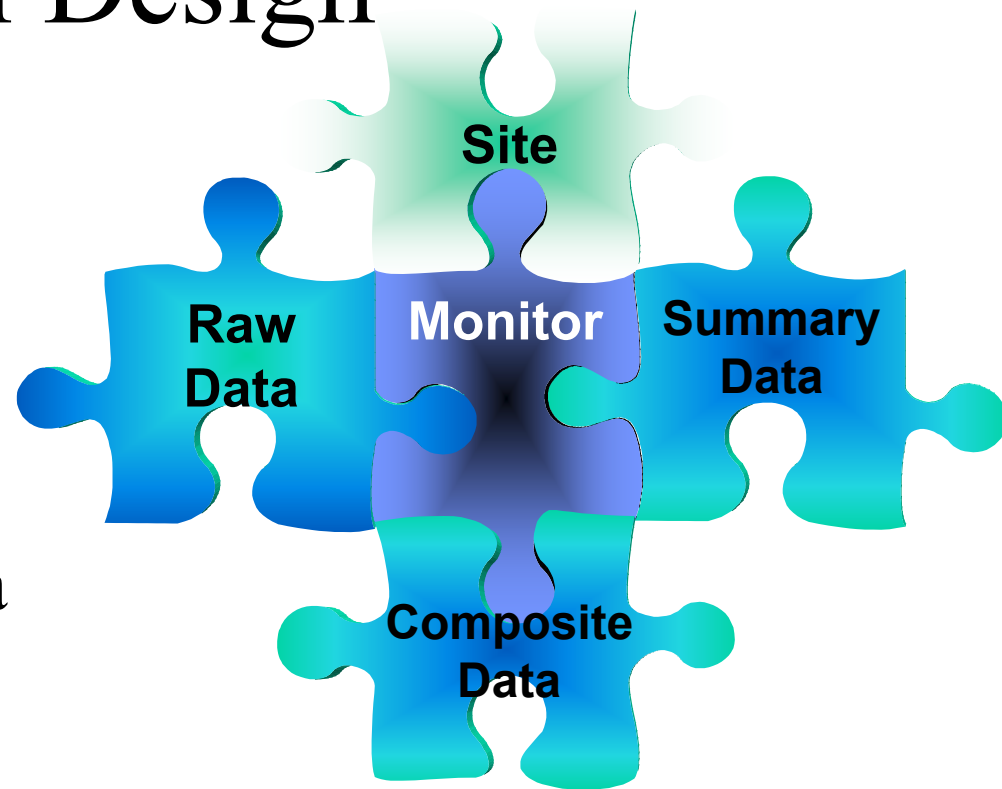
Hourly, Daily, and Sub Hourly Data Record Layout

Field Name	Formatting Rule
Transaction Type [R]	Must exist within Reference Table (RD – Raw Data Type)
Action Code [R]	Must – I, U, or D
State Code [R]	Must exist within Reference Table
County Code [R]	Must exist within Reference Table
Site ID [R]	Must exist within SITE table
Parameter [R]	Must exist within Reference Table
POC [R]	Must exist within MONITOR table
Sample Duration [R(I,U)]	Must exist within Reference Table
Unit [R(I,U)]	Must exist within Reference Table
Method [R(I,U)]	Must exist within Reference Table
Date [R]	YYYYMMDD format
Start Time [R]	hh:mm format
Sample Value [X (I,U)]	Number - 5.5 format
Null Data Code [X (I,U)]	Must exist within Reference Table, if valued
Sampling Frequency	Must exist within Reference Table, if valued
MP_ID	Must exist within Monitor Protocols Table for the Monitor
Qualifier-1	Must exist within Reference Table, if valued
Qualifier-2	Must exist within Reference Table, if valued
Qualifier-3	Must exist within Reference Table, if valued
Qualifier-4	Must exist within Reference Table, if valued
Qualifier-5	Must exist within Reference Table, if valued
Qualifier-6	Must exist within Reference Table, if valued
Qualifier-7	Must exist within Reference Table, if valued
Qualifier-8	Must exist within Reference Table, if valued
Qualifier-9	Must exist within Reference Table, if valued
Qualifier-10	Must exist within Reference Table, if valued
Method Detectable Limit	Number – 5.5 format
Uncertainty	Number – 5.5 format

Two new fields

Raw Data record layout

Transaction Type	Action Code	State Code	County Code	Site ID	Parameter	POC	Sample Duration	Unit	Method	Date YYYYMMDD	Start Time HH:MM	Sample Value	Null Data Code	Sampling Frequency	MP_ID	Qualifier-1	Qualifier-2	Qualifier-3	Qualifier-4	Qualifier-5	Qualifier-6	Qualifier-7	Qualifier-8	Qualifier-9	Qualifier-10	Method Detectable Limit	Uncertainty
RD	I	37	057	5555	81102	1	7	001	062	20010106	00:00	23		6	1												
RD	I	37	057	5555	81102	1	7	001	062	20010112	00:00	16		6	1												
RD	I	37	057	5555	81102	1	7	001	062	20010118	00:00	11		6	1												
RD	I	37	057	5555	81102	1	7	001	062	20010130	00:00	26		6	1												
RD	I	37	057	5555	81102	1	7	001	062	20010205	00:00	14		6	1												
RD	I	37	057	5555	81102	1	7	001	062	20010211	00:00	30		6	1												
RD	I	37	057	5555	81102	1	7	001	062	20010217	00:00	38		6	1												
RD	I	37	057	5555	81102	1	7	001	062	20010223	00:00	16		6	1												
RD	I	37	057	5555	81102	1	7	001	062	20010301	00:00	9		6	1												
RD	I	37	057	5555	81102	1	7	001	062	20010313	00:00	15		6	1												
RD	I	37	057	5555	81102	1	7	001	062	20010319	00:00	17		6	1												
RD	I	37	057	5555	81102	1	7	001	062	20010325	00:00	23		6	1												
RD	I	37	057	5555	81102	1	7	001	062	20010331	00:00	25		6	1												

Decimal points no longer needed!!!

Trailing pipes are optional

AQS Batch Data Input Flowchart

Staging Tables

- CDX → Load File
- Edit/Load Summary
- Edit Error Detail
- Submit Correct Data
- Errors? — Yes → Correct
- Errors? — No

Production Tables-Preproduction Status (R =Relational edits or S=Stat Analysis)

- Raw Data? — No
- Raw Data? — Yes → Stats CR
- Scan Report
- Stat Evaluation
- Post? — No → Maintain
- Post? — Yes

Production Tables

- Post (includes CR & Stat Eval review within Post)
- Raw Data Inventory
- End
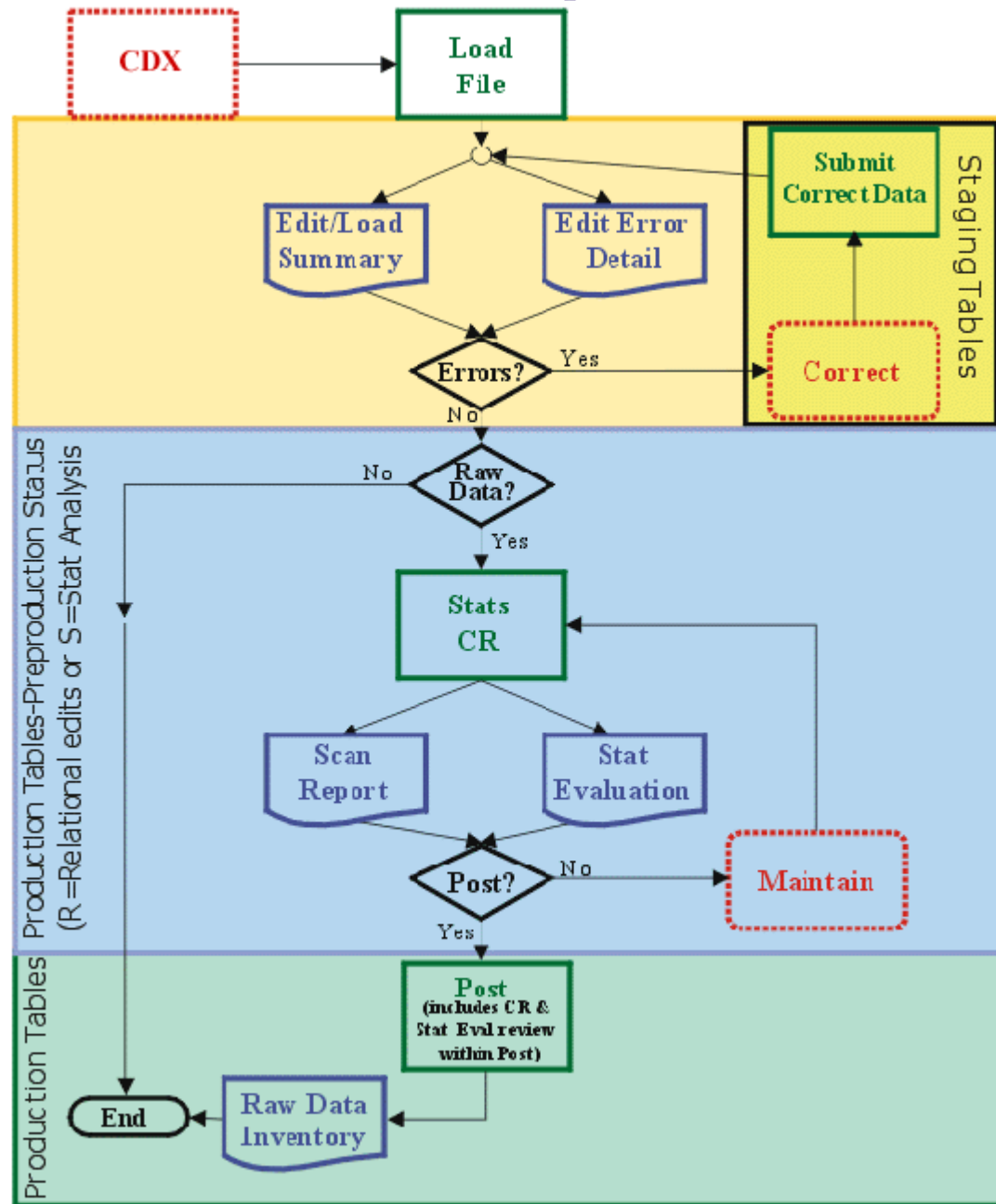
5 Steps for Loading Raw Data

Step 1. Transferring raw data to EPA (CDX)

Step 2. Loading raw data into the AQS database

Step 3. Reviewing the results of Load

Step 4. Simulating the results of proposed updates

Step 5. Posting raw data to production status

Step 1. Transfer Files to CDX

- Raw Data as well as Site and Monitor Data can be recorded as values into "flat" files which must be transferred to EPA.

- CDX is the new procedure to transfer the data files to AQS.   Previously, the files were FTPed to a Unix server and then loaded into AQS

- AQS uses the CDX server to temporary store the input data files prior to loading it into the AQS database.

- Please note CDX will only work with Internet Explorer Version 6.0

Instructor Led Class Exercise 2
Step 1- File Transfer

A. Start AQS, using your username, password and database name.

B. Select your student "screening group access" and Click OK

C. Choose the Batch menu option

D. Press the CDX button from the Batch Process Screen.

A. Another Internet Explorer window will open up to the CDX login screen.

A. Type in your User Name and Password (Note you can synchronize your CDX password on the Admin/Security screen.)

A. From the MyCDX screen you can choice the "AQS: Air Quality System – File transfer" option under "Available Account Profiles"

A. On this screen you will be able to select the files from your Desktop PC to transfer to the CDX server. Click the "SELECT" Button.

A. From the Windows Explorer box, select the AQS file or files you want to load..

A. If the files are correct, click the "SEND" button.

Files (4)	Size (2KB)
C:\aqstraining\cd\aqs_train\admin\extra copies\bad\badt51.txt	542 bytes
C:\aqstraining\cd\aqs_train\admin\extra copies\sitemt\sitemt50.txt	516 bytes
C:\aqstraining\cd\aqs_train\admin\extra copies\sitemt\sitemt51.txt	516 bytes
C:\aqstraining\cd\aqs_train\admin\extra copies\sitemt\sitemt52.txt	516 bytes

SELECT

REMOVE

CLEAR

Please select SEND to validate your webform and transmit the attached data and files to the U.S. Environmental Protection Agency Central Data Exchange for processing.

SEND

A. You can Remove, Clear or Select other files to upload.

A. A window with the files sent/submitted.

You can upload more files or Click on "Exit WebForm" or shut down the CDX window.

An Email will be sent to notify you that the files were sent.

Files from CDX are ready to load

Step 2. Loading Data into the AQS database

- "Load File" is a batch job run on UNIX server known as Canyon.

- The user chooses the file to load that were previously uploaded to the CDX server.

- An email is created as a result of the batch Load job.

Step 2. Loading the Data File

The Highlighted File from CDX will be loaded.

Step 3. Reviewing the results of Data Load

Possibilities:

➤ Clean Load

➤ Loaded with errors

➤ Didn't even get started!

Step 3. Reviewing the Results of the Data Batch Load

- **The Session Status Section** - on the Batch Process screen will show "COMPLETED" for a clean load or "ERROR" for a load with errors.

- The Edit/Load Summary Batch report – summary results of the Load job

- The Edit Error Details - detailed report of errors detected by the Load job. The report identifies the site, monitor, table involved as well as attempts to identify the column in error and to describe the error.

- Email sent to email address in your user profile

Step 3. Reviewing the Results of Load
- Session Status Section of Batch Load

Step 3. Reviewing the Results of Load – Batch Reports

The AQS Batch Reports

Print   Next Page

- In order to run any report you must click on the Next page button, or hit the Page Down key on your keyboard.

- After the report has run you may print or save the report.

Step 3. Reviewing the Results of Load Data Process : Edit/Load Summary Report (clean data)

EPA United States
Environmental Protection Agency

Air Quality Subsystem
Edit/Load Summary Report

Jun. 5, 2002

Screening Group Name : INSTRUCTOR1

Transaction Type	Transaction Type Description	Errors	Exclusions	Edits	Posts	Total
AA	SITE BASIC	0	0	0	1	1
MA	MONITOR BASIC	0	0	0	1	1
MB	MONITOR SAMPLING PERIODS	0	0	0	1	1
MC	MONITOR TYPE INFORMATION	0	0	0	1	1
MD	MONITOR AGENCY ROLE	0	0	0	3	3
ME	MONITORING OBJECTIVE INFORMATION	0	0	0	1	1
RD	RAW DATA	0	0	48	0	48
	Totals	**0**	**0**	**48**	**8**	**56**

If zero in Errors column, then the batch passed the basic edits and the Edit Error Details report will be empty.

Step 4. Simulating results

- Stats CR – is a batch job that generates the pre-production raw data information used in the Scan Report and the Statistical Evaluation Report. (Pre-production means the raw data has passed the edits done during the load process and is no longer in the screening stage.)

- Scan Report – this report provides information on the maximum values and validity flags for raw data while it is still in pre-production status.

- Stat Evaluation Report – this report compares the pre-production data to the existing production data using the Shewhart Test, Patterns test and the Gap test.

- Email sent to email address in your user profile

This is your chance to view the data (and make any appropriate corrections) before it is posted to production status and available for everyone to see.

Step 4. Stats CR Batch Job for Raw Data

Step 4. Scan Report for Raw Data Load

- Look for Max Values above Historical Max, new 1st, 2nd, 3rd, 4th max values, validity flags.

EPA United States
Environmental Protection Agency

Air Quality Subsystem
SCAN Report

Jul. 30, 2001

Monitor Id	Unit	Dur	Year Q	Hist Max - Date	1ST Max	Date-Time	Loc VF	2nd Max	Date-Time Loc VF	3rd Max	Date-Time	Loc VF	4th Max	Date-Time Loc VF
37-057-5555-81102-3	001	7	2001-1	12 01/12/2000 :00 *	38	02/17:00	30		02/11:00	26	01/30:00	25		03/31:00

- The * indicates a percentage value higher than the historical max.

- Are these values what you expected?

Step 4. Statistical Evaluation Report for Raw Data Load

- If any data appears in this report, then data failing the Shewhart Test, Patterns Test, or Gap Test exists in the batch of data.

- Are these values what you expected?
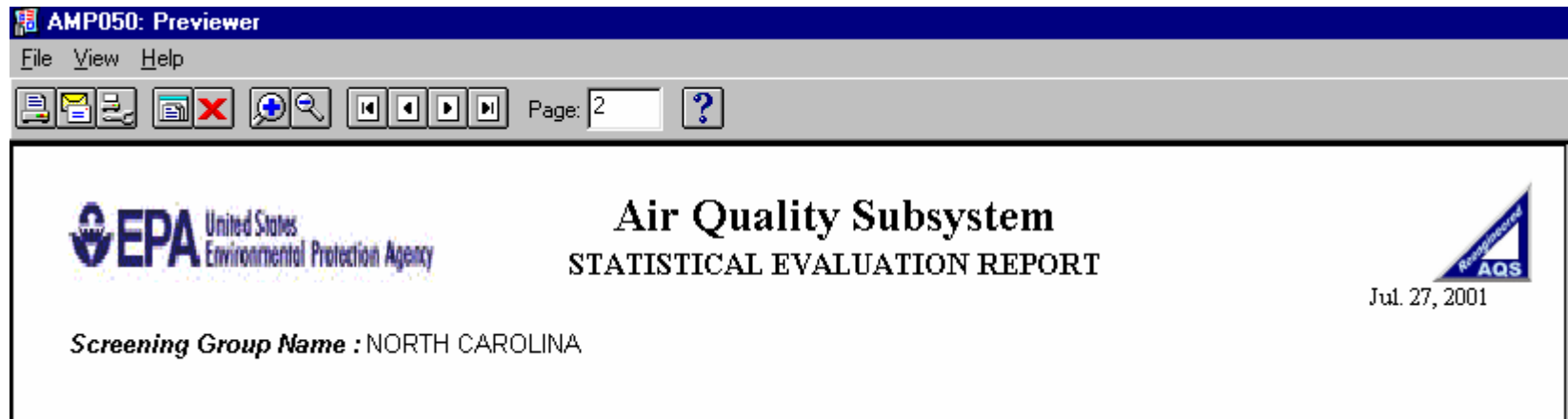
Step 5. Posting the Raw Data to Production

- Post is the final process in the batch update process
- One last chance to verify that the data is ready for the world
- Raw Data Inventory Report is available after Post batch job runs.

- Email sent to email address in your user profile

Step 5. Posting the Raw Data to Production

Step 5. Posting the Raw Data to Production Batch Job

- Raw Overview tab shows the monitor(s) with data ready for Posting on a year-quarter basis.

- If "Y" in CR Exists or Stats Exist column, review the data for that tab to be sure it is

Step 5. Posting the Raw Data to Production Batch Job

Critical Review Raw Data

Step 5. Posting the Raw Data to Production Batch Job – POST!

Step 5. Posting the Raw Data to Production Batch Job – Checking the Session Status Section

Step 5. Posting the Raw Data to Production - Raw Data Inventory Report

- Can be run after the Post Data batch job finishes
- Provided as a summarized record of posted data - not a required step
- One row for each monitor-year-month of posted data

Air Quality Subsystem
Raw Data Inventory Report

EPA United States Environmental Protection Agency

AQS

Jul. 30, 2001

Screening Group: NORTH CAROLINA

Monitor Id	Duration	Year-Mon	Inserts	Updates	Deletes
37-057-5555-81102-3	24 HOURS	2001-1	4	0	0
37-057-5555-81102-3	24 HOURS	2001-2	4	0	0
37-057-5555-81102-3	24 HOURS	2001-3	5	0	0

Total Inserts: 13　　*Total Updates:* 0　　*Total Deletes:* 0

Step 5. Posting the Raw Data to Production Batch Job – Raw Data Inventory Report

AQS Batch Data Input Flowchart

Path taken with "clean" raw data

Legend
- Batch process
- Report
- Online process

Batch Loading Data (Clean) Exercise

- Please turn to Student Exercise 2
- Use your assigned student username (t##), and password aqsis4me2, database is aqstrng
- Where ## is your assigned student number
- Use your corresponding cleant##.txt file in c:\aqs_train\testdata\clean

("##" is your assigned student number)

AQS Data Input Process

What if I have problems with the Batch Load??

What can go wrong?

Simple things like:

- Login failure
- Failed on file name
- Screening group of user does not equal screening group of monitor
- Invalid action indicator
- Monitor ID not in database
- Pre-validate failed

How do I know?

- Look for messages on your screen

- Wait for an email from AQS

- Look at the Edit Error Details Report

Screen messages

Batch Session Error

Error: A batch session exists for this screening group.

OK

Forms

FRM-92102: A network error has occurred.
The Forms Client has attempted to reestablish its connection to the Server 5 time(s) without success. Please check the network connection and try again later.

Details...   OK

Screen messages

Password Expiration Notice

-20796: Password Expiration notification is not active. Please change your password through the application to reactivate.

OK

Application Security Error

Error: You are not authorized to access this module.

OK

Email
Login failure (on Canyon)

```
Input:                    WARNING NOTICE
Input:  This is a United States Environmental Protection Agency (EPA) Computer
Input:  system, which may be accessed and used for authorized use only.
Input:  Unauthorized access or use of this computer system may subject violators
Input:  to criminal, civil, and/or administrative action.  All information on
Input:  this computer system may be monitored, recorded, read, copied,
Input:  and disclosed by and to authorized personnel for official purposes,
Input:  including law enforcement.  Access or use of this computer system by
Input:  any person, whether authorized or unauthorized, constitutes consent to these
terms.
Input:  Compaq Tru64 UNIX V5.1 (Rev. 732) (canyon) (pts/1)
Input:   login:
Sending Unix ID to host.
Input:  Password:
Sending     Unix Password to host.
Input:
Input:  Login incorrect
Input:  Wait for login retry ...
Input:  Login incorrect
Input:   login:
Login Failure!  Check user-id and password.

Unable to submit batch reporting job!
```

Email

Monitor Id not in Database

```
Error on line 1: Monitor ID (State, County, Site, Parameter, POC) not in database
Input Transaction 1: RP|I|01|073|1006|88101|1|1|7|105|116|20010110|008.4|116|008.4|||
Error on line 2: Monitor ID (State, County, Site, Parameter, POC) not in database
Input Transaction 2: RP|I|01|073|1006|88101|1|1|7|105|116|20010122|013.2|116|010.7|||
```

Invalid action indicator

```
    ERROR: AIRS_BATCH
 On Line 1          Invalid Action Indicator
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
Input Transaction: RD|m|06|045|0009|44201|1|1|008|014|19980425|09|0016.|||||||||||||
!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
```

Edit Error Details Report

United States Environmental Protection Agency
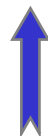
Air Quality Subsystem
Edit Error Report

Screening Group : INSTRUCTOR 2   **User ID :** TRF   **Session Date :** Oct. 05, 2001 14:24

Site/Monitor : 13-021-2222-42101-1

Table Name : RAW DATA

Transaction : RD |I |13 |021 |2222 |42101 |1 |1 |007 |009 |20000102 |00:00 |.005 |||||||||||||||

Column In Error	Error Description
UNKNOWN	Invalid Monitor Protocol

Site/Monitor : 13-021-2222-42101-1

Table Name : RAW DATA

Transaction : RD |I |13 |021 |2222 |42101 |1 |1 |007 |009 |20000102 |02:00 |001 |||||||||||||||

Column In Error	Error Description
UNKNOWN	Invalid Monitor Protocol

"Dirty" Data

Problems a little more involved will show up with this data.

Data is for the same monitor as earlier ("clean") data.

```
RD|I|37|057|5555|81102|1|7|001|062|20010106|00:00|23||6|1||||||||||
RD|I|37|057|5555|81102|1|7|001|062|20010106|01:00|23||6|1||||||||||
RD|I|37|057|5555|81102|1|7|001|062|20010301|00:00|9||6|1||||||||||
RD|I|37|057|5555|81102|1|7|001|062|20010413|00:00|1500||6|1|||||||||||
RD|I|37|057|5555|81102|1|7|001|062|20010319|00:00|17||6|1||||||||||
RD|U|37|057|5555|81102|1|7|001|062|20010401|00:00|25||6|1||||||||||
RD|D|37|057|5555|81102|1|7|001|062|20010407|00:00|23||6|1||||||||||
```

Summary Load results for "dirty" data

R251: Previewer

File View Help

Page: 2

Air Quality Subsystem
Edit/Load Summary Report

United States
Environmental Protection Agency

Jul. 30, 2001

Screening Group Name : NORTH CAROLINA

Transaction Type	Transaction Type Description	Errors	Exclusions	Edits	Posts	Total
RD	RAW DATA	6	0	1	0	7
	Totals	**6**	**0**	**1**	**0**	**7**

6 transactions failed the basic edits: 1 passed

Detail Load results for "dirty" data

Air Quality Subsystem
Edit Error Report

Jun. 5, 2002

Screening Group : INSTRUCTOR1   User ID : TRF   Session Date : Jun. 06, 2002 16:42

Site/Monitor : 37-057-5555-81102-1
Table Name : RAW DATA
Transaction : RD |D |37 |057 |5555 |81102 |1 |7 |001 |062 |20010407 |00:00 || |1 | | | | | | | | | | |

Column In Error	Error Description	Error Code
Relational	Production record doesn't exist to update or delete	-20718

Site/Monitor : 37-057-5555-81102-1
Table Name : RAW DATA
Transaction : RD |I |37 |057 |5555 |81102 |1 |7 |001 |062 |20010106 |00:00 |23 | |1 | | | | | | | | | |

Column In Error	Error Description	Error Code
Multiple Columns	Sample duration overlaps immediately preceding or succeeding sample value	-20692

Site/Monitor : 37-057-5555-81102-1
Table Name : RAW DATA
Transaction : RD |I |37 |057 |5555 |81102 |1 |7 |001 |062 |20010106 |01:00 |23 | |1 | | | | | | | | | |

Column In Error	Error Description	Error Code
Multiple Columns	Sample duration overlaps immediately preceding or succeeding sample value	-20692

Site/Monitor : 37-057-5555-81102-1
Table Name : RAW DATA
Transaction : RD |I |37 |057 |5555 |81102 |1 |7 |001 |062 |20010301 |00:00 |9 | |1 | | | | | | | | | |

Column In Error	Error Description	Error Code
Relational	A pre-production Record already exists for the Monitor - Date-Time	-20674

Site/Monitor : 37-057-5555-81102-1
Table Name : RAW DATA
Transaction : RD |I |37 |057 |5555 |81102 |1 |7 |001 |062 |20010319 |00:00 |17 | |1 | | | | | | | | | |

Column In Error	Error Description	Error Code
Relational	A pre-production Record already exists for the Monitor - Date-Time	-20674

Site/Monitor : 37-057-5555-81102-1
Table Name : RAW DATA
Transaction : RD |U |37 |057 |5555 |81102 |1 |7 |001 |062 |20010401 |00:00 |25 | |1 | | | | | | | | | |

Column In Error	Error Description	Error Code
Relational	Production record doesn't exist to update or delete	-20718

Using the Correct option

- Correct is used to change data in the staging tables – I.e., data that did not pass the basic edits

- Can edit one transaction at the time or make global changes

- Messages at bottom of screen are the same messages as on the Edit Error Details Report

Using the Correct option

- New transactions may be entered on Correct

- After making changes/additions on Correct screen, be sure to **SAVE** your changes

- Can use the "Delete by screening group" to completely eliminate all records in the staging tables for your screening group
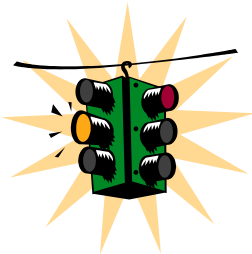
Be sure this is what you want to do. It works quickly and it deletes *everything* for the screening group, including data entered by other users in your screening group.

Sample Correct Screen

After corrections are made . . .

- Next step is to attempt to Load this data again.

- Use the Submit Corrected Data

- Only data in the staging tables will be loaded

- Check for errors again (from the Edit Error Details Report or from the Correct option)

- If new errors, loop back thru Correct

Sample: Submit Corrected Data

Once you're satisfied with corrections. . .

- Run the Stats CR batch job

- Review the Scan and Stat Evaluation reports

- Make any additional modifications using the Maintenance option (to data no longer in the staging tables)

- Post the data

Sample Scan Report

Air Quality Subsystem
SCAN Report

EPA United States Environmental Protection Agency

Monitor Id	Unit	Dur	Year Q	Hist Max - Date	1ST Max	Date-Time	Loc VF	2nd Max	Date-Time	Loc VF	3rd Max	Date-Time	Loc VF	4th Max	Date-Time	Loc VF
37-057-5555-81102-3	001	7	2001-2	38 02/17/2001 :00 *	1500	04/13:00		25	04/01:00		23	04/07:00				

The historical max for data currently in production for this monitor is "38" for 2/17/01.

New data will create a new historical max of 1500. This value will also be the 1st max for 2nd qtr of 2001.

Sample Statistical Evaluation Report

EPA United States
Environmental Protection Agency

Air Quality Subsystem
STATISTICAL EVALUATION REPORT

AQS

Jul. 30, 2001

Screening Group Name : NORTH CAROLINA

Monitor Id	Date:Time	Error	Above Gap Cnt	Slot Below Gap Cnt	Total Gap Cnt
37-057-5555-81102-3	Apr. 01, 2001 :00	Fails Shewhart test.			

Better double check that 1500 value!

Using Maintenance to modify pre-production records

- Scan and Stat Evaluation reports are designed to help you review your data without having to review each and every sample value.

- Data in pre-production status is only viewable from the Maintenance option

- Pre-production status codes are:
  - R (passed relational edits)
  - S (statistical edits have been run)

- Production status code:
  - P (data is in production)

Maintenance – other uses

- Modify existing production data
- Add new data

NOTE: Whenever any sample value data is added or modified using the Maintenance option, that data must be run through the Stat CR batch job before it may be posted to production status.

Sample Maintenance Screen

Sample Maintenance Screen – After saving changes

Notice that Status Indicator changes back to "R"

Next . . .

- Status Ind of "R" means data has only passed the basic and relational edits. Statistical edits need to be run again since sample values have changed.

- Rerun Stat CR batch job and review Scan and Stat Eval reports again

EPA United States
Environmental Protection Agency

Air Quality Subsystem
SCAN Report

AQS

Jul. 30, 2001

Monitor Id	Unit	Dur	Year Q	Hist Max - Date	1ST Max	Date-Time	Loc VF	2nd Max	Date-Time Loc VF	3rd Max	Date-Time	Loc VF	4th Max Date-Time Loc VF
37-057-5555-81102-3	001	7	2001-2	38 02/17/2001 :00	25	04/01:00		23	04/07:00	15	04/13:00		

EPA United States
Environmental Protection Agency

Air Quality Subsystem
STATISTICAL EVALUATION REPORT

AQS

Jul. 30, 2001

Screening Group Name : NORTH CAROLINA

Ready to Post: Posting the Raw Data to Production Batch Job

Ready to Post!

Run the Raw Data Inventory Report

AQS Batch Data Input Flowchart

Path taken with "dirty" raw data

Legend
- Batch process
- Report
- Online process

Adding Batch Raw Data is as easy as . . .

1 FTP

2 Load

3 Review Load Results

4 Stats CR

5 Post

Batch Loading Raw Data (Bad or Dirty) Exercise

- Please turn to Student Exercise 3
- Use your assigned student username (t##), and password aqsis4me2, database is aqstrng
- Where ## is your assigned student number
- Use your corresponding badt##.txt file in c:\aqs_train\testdata\bad

("##" is your assigned student number)

Maintaining the Data

Browse, Update, and Posting Updated Data

In This Module

- We will examine how to use the Maintenance screens for using online Browsing and Updating for Site and Monitor information. Other transactions use similar processes with different screen formats.

Overview

- Browsing the Data

- Updating the Data

- Posting the Updated Data

The AQS "Tool Bar"
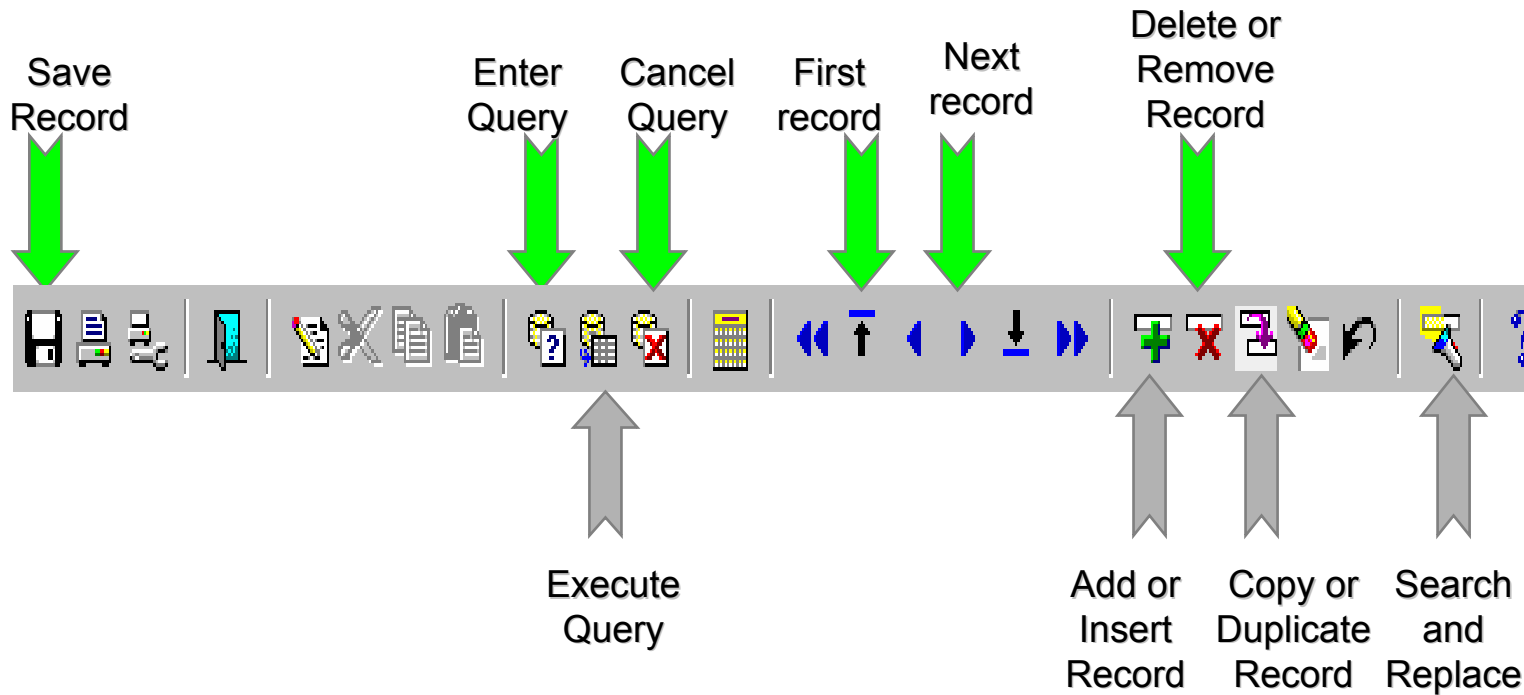
Browsing the AQS Data

- Browse from the Maintenance option
  - Read only access
  - Selection global or by record
  - Displays data as stored
    - Codes (01) vs. descriptors (Alabama)

Steps for Browsing the AQS Data

- Step 1: Choose the "Maintenance" button, then the choose the type of data you would like to browse (Site, Monitor, Audit, Event, etc) option.

- Step 2: NO NEED to Click "Enter Query" button before you enter any data. (New version in Enter Query)

- Step 3: After choosing the State Code, County Code and if known other data, click on the "Execute Query" button.

- Step 4: Browse the data.

  Note: If you chose to leave this screen before you "Execute" the Query , you must choose the "Cancel Query" button.

Step 1. Choose the Maintenance Option
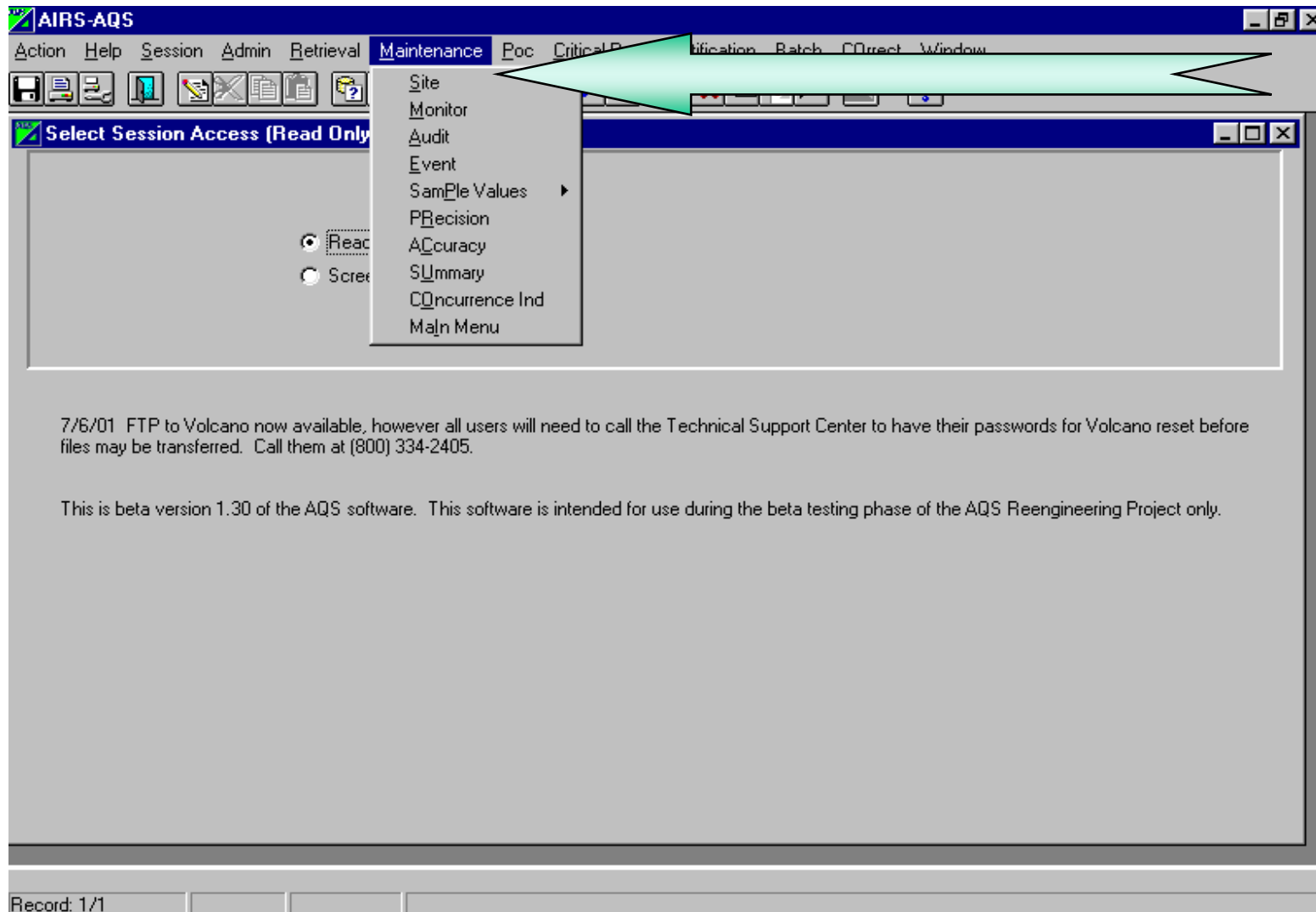
Site Data

Step 2. New AQSWEB User is in Query Mode

Step 3. Enter State, County and other data and Click on "Execute Query"

Step 4. Browse the Data!

Remember how to get the next record? First/last record? Next/previous block?
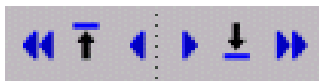
Step 4. Browse the Data: Optional Site Data, Agency Roles, Tangent Roads, Open Paths
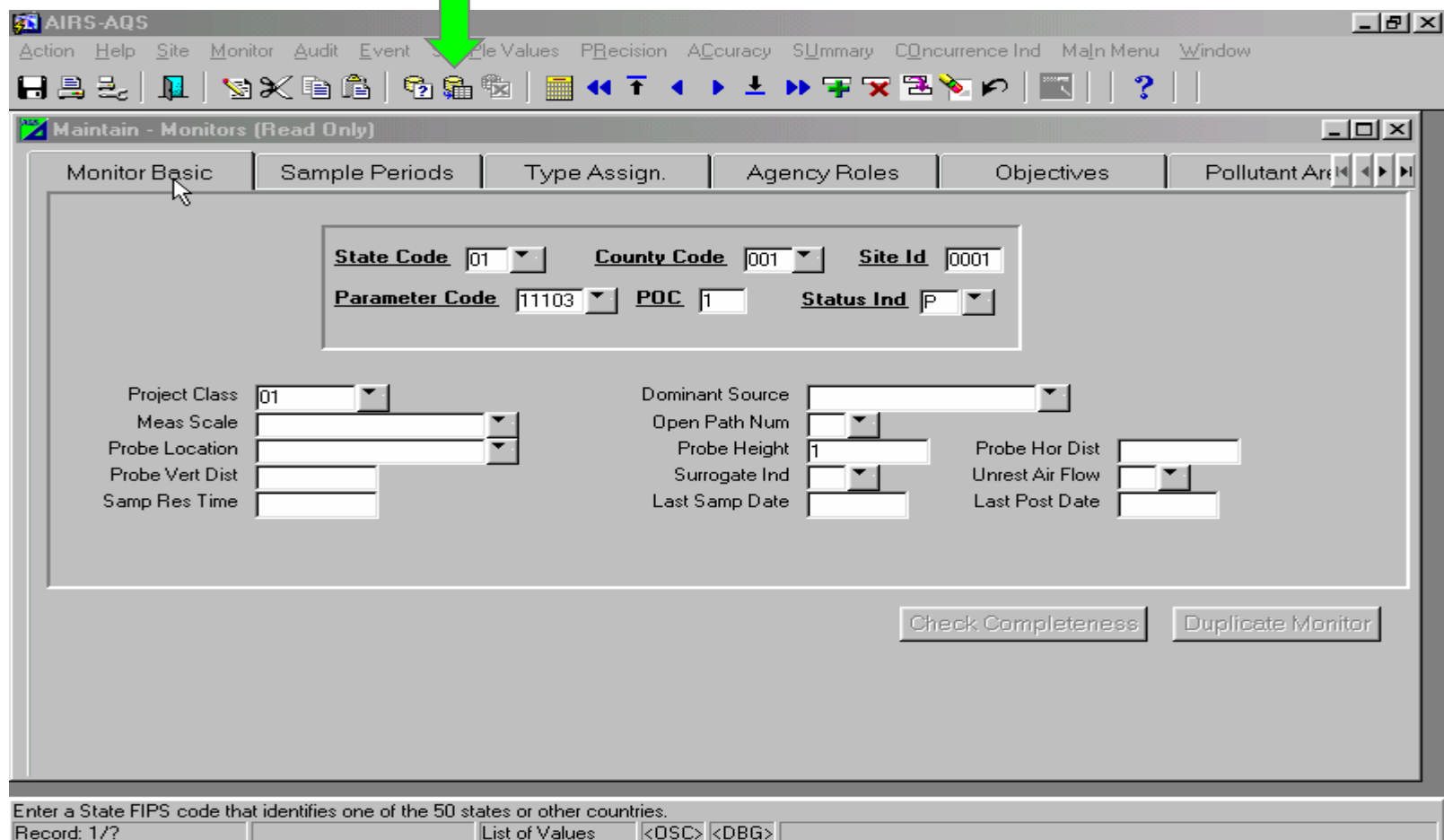
Step 1. Choose the Maintenance Option
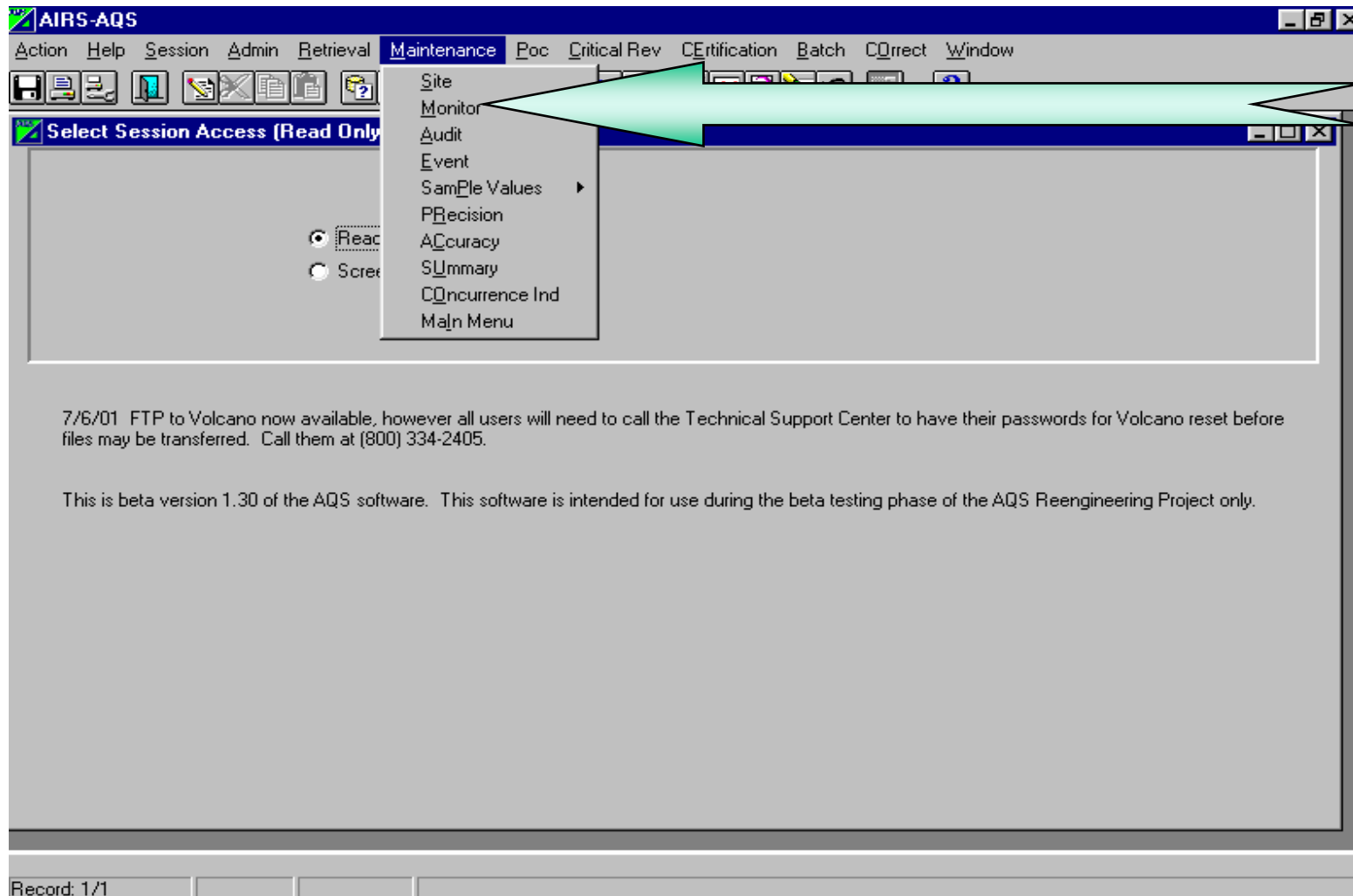
Step 3. Enter data for State, County Code and other Data and click "Execute Query"

Step 4. Browse the Data!

Page up and down or use arrow keys.

Step 4. Browse the Data: For Monitors, Sample Periods, Agency Roles, Pollutant Areas and Other Data

Break and Browsing the AQS Data Exercise

- Please turn to Student Exercise 4

- Use your assigned student username (t##), and password aqsis4me2

- Where ## is your assigned student number

Maintaining the Data: AQS Online Update

- Update with Maintain
  - Update existing records
  - Delete records
  - Add new records
- Screening Group Ownership
  - Data must be "owned" to be changed
  - Selection global or by record
  - Edits/Validations performed
    - Type entry or drop down lists to select
    - Required fields/tabs identified (bold / underlined)
  - **Save Changes**
    - Checks dependencies between tabs

Update Existing Records

- Can Update
  - Site Records
  - Monitor records
  - Raw Data records
- Select global (all in county) or individual data – based on ownership.
- Enter new data or change data elements and press "SAVE" to save options.
- Go through the POST process, if raw data is updated.

save

Delete Records

- Raw data may be deleted.
  - Remember to run Stats CR job & post the deletes
- Monitors may be deleted.
  - This deletes any related records.
  - All data must be deleted first.
- Sites may be deleted
  - All but one monitor must be deleted first.

Remove Record

Site/Monitor Add

- Select Maintain Site screen
  - 1. Cancel Query button
  - 2. Add (+) Record button
  - 3. Enter new Site ID
  - 4. Enter site data in fields
  - 5. Click Save record button
  - 6. Click on Create Monitor button
- Maintain Monitor Screen
  - 1. Cancel Query button
  - 2. Add (+) Record Button
  - 1. Select parameter
  - 2. Enter monitor data in fields
  - 3. Click Save record button

Adding a New Site   Step 1. Enter a new Site ID Number

Don't press enter query first!

Adding a New Site
Step 2. Enter Site Data
Step 3. Save the record

Save record

Add Site Data as required

Adding a New Site Step 4. Click on Create Monitor button

Adding Monitor Data Step 1. Select parameter

Adding Monitor Data
Step 2. Enter Monitor Data

Step 3. Click Save record button

Save record

Add Monitor Data as required

Update by Duplicate Monitor

- Duplicate Steps
  - Query to select monitor
  - Click on Duplicate Monitor
  - Enter new parameter and POC codes
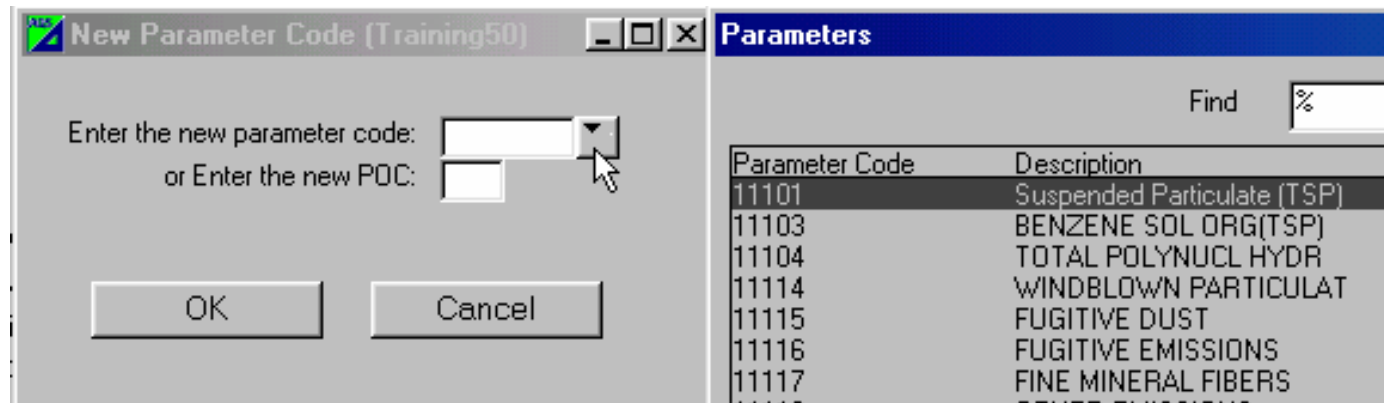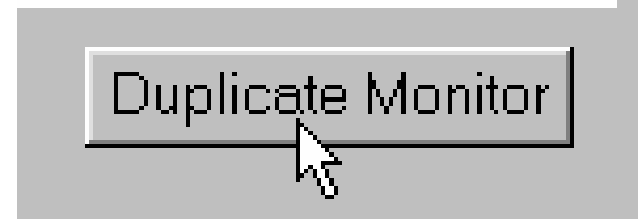
  - Click on Okay
  - Click on "save"
  - Respond to error messages
  - Final "save"

Maintaining the AQS Data - Raw Data
Inserts, Updates, Deletes

- The primary way to insert, update or delete raw data is thru the data input batch process

- Can do updates and deletes to "pre-production" (Status-ind = R or S) raw data which have been loaded using the data input batch process

- Can add new raw data using Maintain
  - For lead, particulate,…..

Maintaining the AQS Data - Posting the Updated Data

- If any CHANGES are made to the raw data, these changes must go thru the batch POST process to be checked for errors and posted to the AQS database.

- If updates are made to the site and monitor data, these changes are updated on the database from the maintenance screens. Note: Post is not needed for site/monitor changes.

Adding a New Site/Monitor Exercise

- Please turn to Student Exercise 5

- Use your assigned student username (t##), and password aqsis4me2, database is aqstrng

- Where ## is your assigned student number

("##" is your assigned student number)

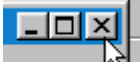# The AQS Canned Reports
AQS Reports

Introduction

- In this module we will examine how data is retrieved using "Canned" Reports. They are grouped:
  - Standard Reports
  - Browse Reports

    The Format of both types of reports have preset contents .

- Ad Hoc reports can be customized to contain information that the user identifies. A introduction to Oracle Discoverer session will follow the end of this session. Also, refer to Appendix C for Oracle Discoverer guidelines and tips.

Canned Reports

- Standard and Browse reports can provide site, monitor, summary or raw data information.

- Data retrieved is <u>not</u> limited to your screening group!

- Reports contents can be altered by providing different criteria information. Criteria information is specifications used to generate the report:
  - geographical,
  - pollutant, and / or
  - date range.

- You may recognize many of these standard reports as the 'AMPXXX' reports.

- Provide as detailed a criteria as possible to help reduce system overhead!

Requirements

- The Oracle report engine will not start another report if another report is open. Check the bottom of your screen for icons that indicates a previewer is already running and close [icon] old reports to start a new one.
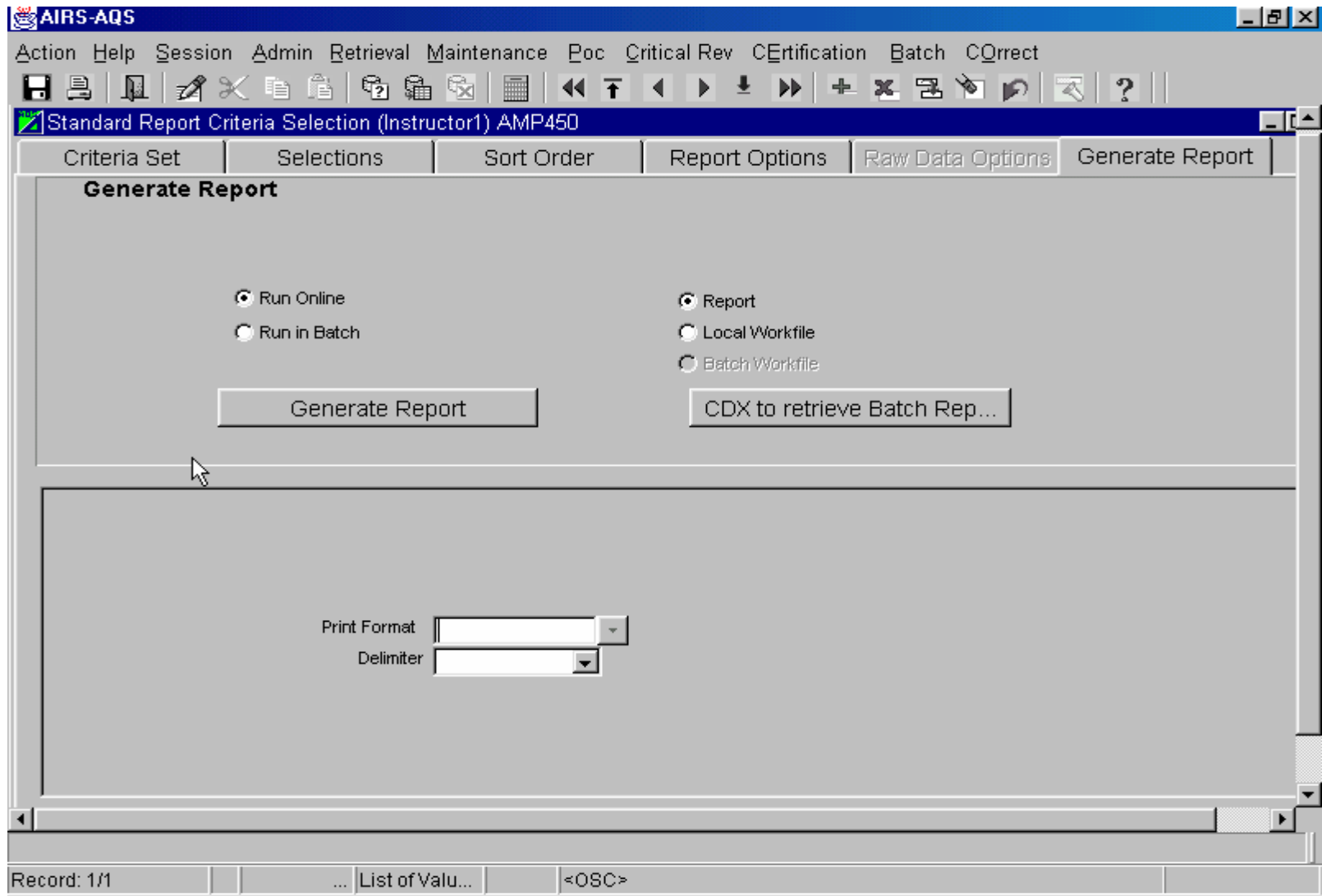
- The next slide gives data that is required to run the different types of standard reports. It can be used for future reference.

- Note that most reports require from and to dates. The training database is 1998 data.

Report Name	Date	Parameter	Geographic
Accuracy	R	R1	R1
Daily Summary	R	R2	R2
Precision	R	R1	R1
Air Quality Index	R	R1	R1
Data Completeness	R	R1	R1
Frequency Distribution	R	R1	R1
Max Values	R	R	
Monitor Description		R2	R2
Monitor Network		R2	R2
P/A Monitor Raw Data	R	R1	R1
P/A Reporting Organization	R		R
Quick Look	R	R1	R1
Raw Data	R	R2	R2
Reduced Frequency	R	R1	R1
Site Monitor		R	R
Violation Day Count	R	R	

R = Required; R1= Parameter OR Geographic in addition to date, R2=Geographic OR Parameter

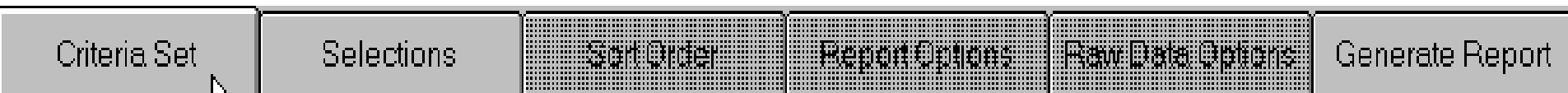# Report Generate Screen – Online

Instructor Lead Exercise
Getting started

- Step 1   Log into AQS and choose your Screening group.

- Step 2 Click on 'Retrieval' and then 'Standard Report Selection Criteria' from the drop down menu.
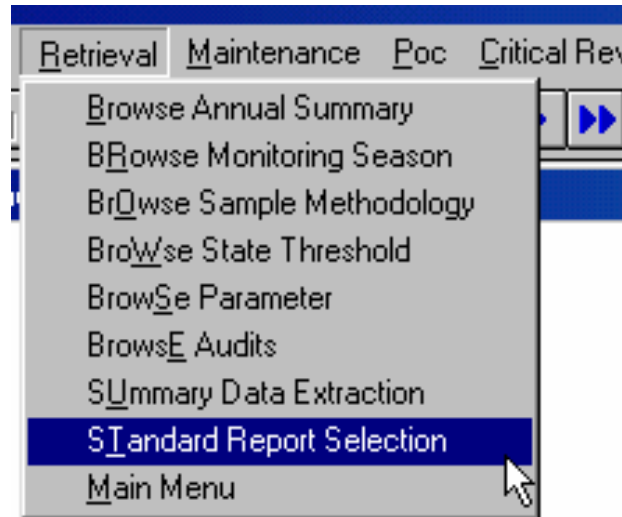
- Step 3 The "criteria set" is the first report tab.   Note that several tabs are not active or "on", these will become active when you choose a report.

Instructor Lead Exercise
Criteria & Selections Tabs

- Step 4. Click on the Report Code pull down list. Choose the AMP450.

- Generating a report is a matter of providing the necessary information on the Criteria Set, Selections, Sort Order, Report Options, Raw Data Option and Generate Report tabs. Working left to right on tabs is recommended.
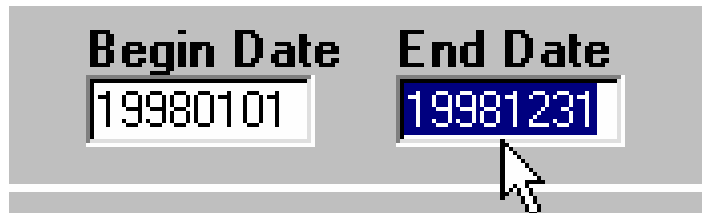
- Step 5 Go to the Selections tab and enter your region, state,

    pick a county and site.
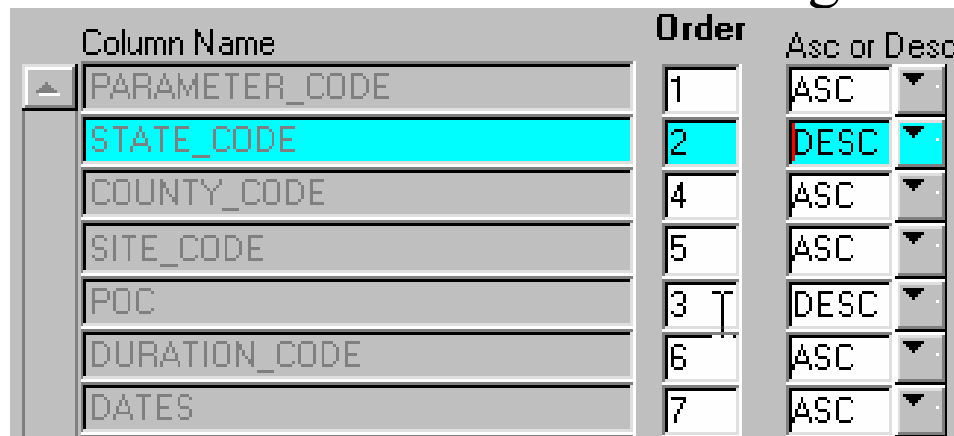
Instructor Lead Exercise
Criteria & Selections Tabs

Step 6 Put in a date range at the bottom or the screen.

Begin Date	End Date
19980101	19981231

Step 7 Go to the Sort Order Tab. Change the order as shown:

Column Name	Order	Asc or Desc
PARAMETER_CODE	1	ASC
STATE_CODE	2	DESC
COUNTY_CODE	4	ASC
SITE_CODE	5	ASC
POC	3	DESC
DURATION_CODE	6	ASC
DATES	7	ASC

Step 8. Go to the report options and exclude exceptional events.

EXCLUDE EXCEPTIONAL EVENTS ☑

Instructor Lead Exercise
Report Generate Screen – Online

Instructor Lead Exercise
Report Generate Screen – Online

Instructor Lead Exercise
Criteria & Selections Tabs

Step 9   Go to the Generate Report tab and click on Run in Batch.

Run in Batch

Notice the information that appears.

Batch reports are done as time is available and delivered via email or put into a file or printed. To get one, fill in the information needed, and press Generate Report.

Run Online

Step 10   Change the type of report to Run Online
          If no data is found, loosen your criteria.
          Perhaps remove the site id.

Instructor Lead Exercise
Criteria & Selections Tabs
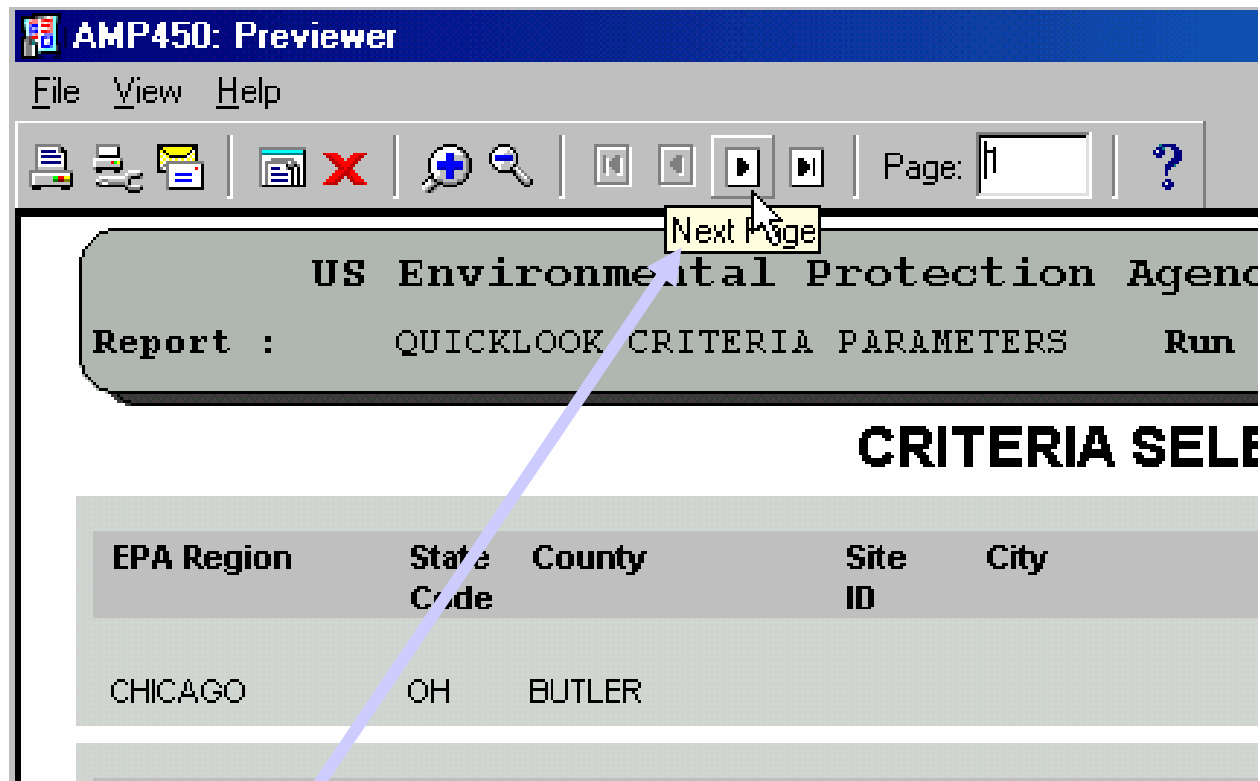
Instructor Lead Exercise
Criteria & Selections Tabs
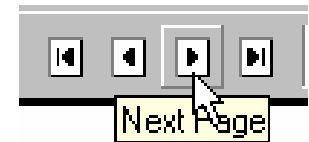
Step 11 A Report Previewer appears.

Click on Next Page

Instructor Lead Exercise
Criteria & Selections Tabs
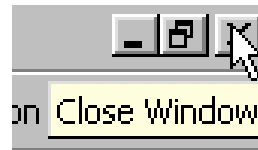
You can page up and down through your report.

Next Page

Parameter: OZONE (8-Hour)
All Values are in Units of Parts Per Million

Site ID	POC	Org Type	City	County	Address	Year
39-017-1004	3	F	MIDDLETOWN	BUTLER	HOOK FIELD MUNICIPAL AIRPORT	1998
39-017-0004	1	F	HAMILTON	BUTLER	SCHULER AND BENDER AVE	1998

Step 12. Close the report   and go back to the criteria set tab.

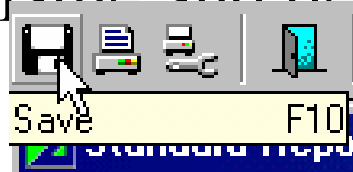Close Window

Instructor Lead Exercise
Criteria & Selections Tabs

- Step 13 Your criteria set that you used can be saved for reuse.

Criteria Set	450 5 39	Desc	first half of 1998
Last Used	20011005 13:56		

enter a criteria set name and description that you will recognize.

Save   F10

Press save.

Criteria set   o.   After pressing save, press clear   Clear All
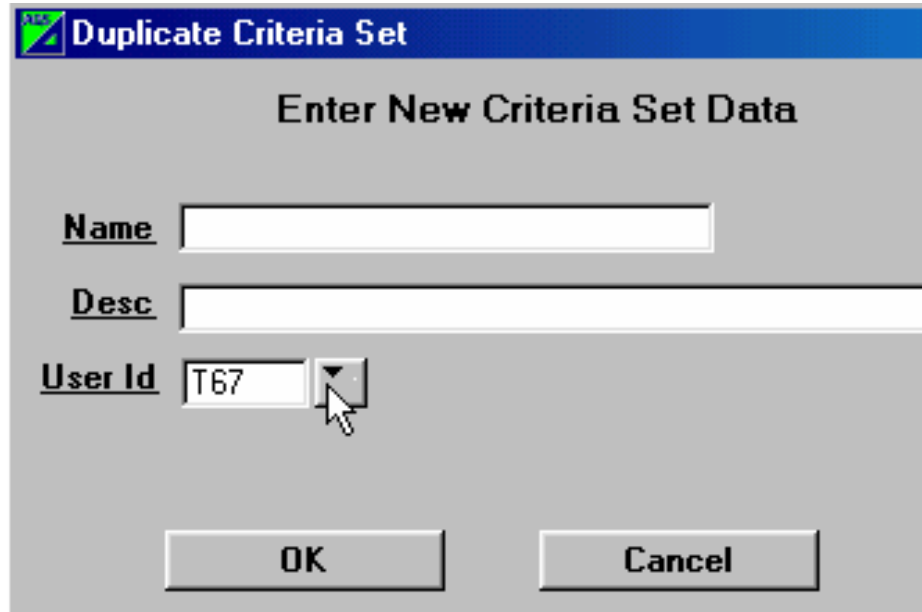
Instructor Lead Exercise
Sort Order Tab

- Note: Criteria sets can be retrieved by entering a query and
  selecting the pull down next to criteria set.
  Criteria sets can be given to other people.

Duplicate Criteria Set

You can give the set a new name, description, and choose the
user to give it to.

Duplicate Criteria Set

Enter New Criteria Set Data

Name

Desc

User Id   T67

OK   Cancel

Using the Canned AQS Reports Exercise

- Please turn to Student Exercise 6

- Use your assigned student username (t##), and password aqsis4me2, database is aqstrng

- Where ## is your assigned student number

("##" is your assigned student number)